

EXHIBIT 9

1
2 UNITED STATES DISTRICT COURT
3 DISTRICT OF MASSACHUSETTS
4

5 _____
6 In Re: CREDIT SUISSE-AOL
7 SECURITIES LITIGATION

8 Master File No. 1:02 cv12146
9

10 _____
11 This Document Relates To:
12 ALL ACTIONS
13

14 VIDEOTAPED
15 DEPOSITION OF LAURENTIUS MARAIS
16 New York, New York
17 Wednesday, August 13, 2008
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22
23

24 Reported by:
25 FRANCIS X. FREDERICK, CSR, RPR, RMR
JOB NO. 18035

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August 13, 2008
9:39 a.m.

Videotaped deposition of
LAURENTIUS MARAIS, held at the offices
of DAVIS, POLK & WARDWELL, 450 Lexington
Avenue, New York, New York, pursuant to
Notice, before Francis X. Frederick, a
Certified Shorthand Reporter, Registered
Merit Reporter and Notary Public of the
States of New York and New Jersey.

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A P P E A R A N C E S:

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Attorneys for Lead Plaintiff Bricklayers
and Trowel Trades International Pension
Fund, the Proposed Class and Dr. Hakala
850 Third Avenue
New York, New York 10022
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JOEL STRAUSS, ESQ.

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Boston USA
450 Lexington Avenue
New York, New York 10017
BY: DANIEL J. SCHWARTZ, ESQ.
MELISSA OLIVER, ESQ.
GUY HALFTECK, ESQ.

ALSO PRESENT:

SILVIO FACCHIN, Videographer

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PROCEEDINGS

THE VIDEOGRAPHER: I'm going to
ask you to stand by, please.

This is the tape labeled number
one of the videotaped deposition of
Marthinus Laurentius Marais in the
matter of In Re. Credit Suisse AOL
Securities Litigation. We are now going
on the record. The time is 9:39 a.m.
Counsel would state their appearances
for the record.

MR. SCHWARTZ: Daniel Schwartz,
Davis Polk & Wardwell for the Credit
Suisse Defendants.

MR. HALFTECK: Guy Halfteck, Davis
Polk & Wardwell.

MS. OLIVER: Melissa Oliver, Davis
Polk & Wardwell.

MS. RODON: Melinda Rodon with
Kaplan Fox & Kilsheimer for the witness,
lead plaintiff in the class.

MR. STRAUSS: Joel Strauss of
Kaplan Fox & Kilsheimer for lead
plaintiffs.

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LAURENTIUS MARAIS, called
as a witness, having been duly sworn
by a Notary Public, was examined and
testified as follows:

EXAMINATION BY
MR. SCHWARTZ:

**Q. Dr. Marais, my name again is
Daniel Schwartz. I'm an attorney at Davis
Polk and we represent one of the defendants --
actually, two of the defendants in this case.**

**I take it you've been deposed
before; is that right?**

A. I have.

**Q. So are you familiar with the
ground rules of depositions?**

A. I've been given guidance
previously. I'm not sure what you have in
mind as the ground rules.

**Q. Okay. Well, I'll just cover it
briefly then. I'll be asking you questions
today. Your job is to answer them. You
should be giving verbal and audible responses
so that the court reporter can pick up your
answers.**

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L. MARAIS**Does that all make sense?**

A. So far.

Q. Okay. If you don't understand a question that I've asked, you can ask me to clarify and I'll -- or rephrase it and I'll do my best. If you need a break at any point in time please let me know and I will try and accommodate you. The only caveat on that is if a question is pending I would like you to answer that question and then we can try and take a break.

Does that make sense?

A. That makes sense.

Q. Okay. Just for purposes of understanding today, I may use various abbreviations at points in time. So, for example, if I say CSFB will you understand that I'm referring to Credit Suisse First Boston?

A. I'll keep that in mind.

Q. Okay. If I refer to AOL I will intend that to mean the merged entity of American Online, Time-Warner. If I want to refer to a particular division of that company

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I will refer to either the America Online division or the Time-Warner division. Does that also make sense?

A. It makes sense, yes.

Q. Are you represented by counsel here today?

A. I am not personally represented.

And to the extent that I understand your question properly Mr. Schwartz and Ms. Rodon are here but they're not my personal counsel.

Q. I'm sorry. Do you mean Mr. Strauss?

A. I'm sorry. I meant Mr. Strauss indeed.

Q. Just to clarify because I'm Mr. Schwartz.

A. Yes.

Q. Ms. Rodon or Mr. Strauss may object from time to time to my questions. If they do as long as you understand the question you can go on and answer it.

Does that make sense?

A. Yes.

Q. Are there any medical -- do you

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have any medical or physical conditions that would prevent you from testifying truthfully or accurate today?

A. None that I'm aware of.

Q. Could you tell me what you did to prepare for your deposition today?

A. I reread my declaration in this case as well as -- including its attachments and as well I reread the Stoltz reports and the Hakala report to which it makes reference.

Q. Did you meet with -- I'll withdraw that.

Have you read Dr. Hakala's rebuttal report in this case?

A. I've read only one Hakala report in this case and I don't think it was -- contained the word rebuttal. It's the one I referred to in my written report.

Q. Do you meet with counsel in preparation for your deposition today?

A. Yes.

Q. And who did you meet with?

A. With Mr. Strauss and Ms. Rodon.

Q. Other than Mr. Strauss and --

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well, how many times did you meet with them?

A. Once.

Q. Did you have any -- for how long did you meet with them?

A. Approximately one -- somewhere between one and two hours.

Q. And when was that?

A. Yesterday.

Q. Other than Mr. Strauss and Ms. Rodon, was anyone else present?

A. No.

Q. Did you have any phone calls with them prior to that meeting?

A. I have had a number of phone calls with Ms. Rodon.

Q. In preparation for this deposition?

A. No.

Q. In connection with your preparation of your expert report in this matter?

A. Yes.

Q. Other than your expert report and -- or your declaration and the Stoltz

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1 **L. MARAIS**
 2 **report and the Hakala -- the portions of the**
 3 **Hakala report that you referred to, have you**
 4 **reviewed any other documents in preparation**
 5 **for your deposition today?**

6 A. I'm thinking about other documents
 7 but in fact what comes to mind are documents
 8 which are attached to my report such as my
 9 curriculum vitae and the two articles attached
 10 thereto.

11 So I -- nothing else comes to
 12 mind. If I think of something that seems
 13 properly responsive that escapes me at this
 14 moment I will find a moment to bring it up.

15 **Q. Okay. Did you read any deposition**
 16 **transcripts in connection with that -- sorry.**

17 **Let me withdraw that.**

18 **In this case there have been a**
 19 **number of depositions including several**
 20 **depositions of experts recently. Have you**
 21 **read any of the transcripts from those**
 22 **depositions in preparation for your deposition**
 23 **today?**

24 A. I have read a portion of one
 25 transcript.

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2 **Q. Okay. What transcript was that?**

3 A. It was a transcript of a
 4 deposition of Dr. Hakala.

5 **Q. Was that the transcript -- do you**
 6 **recall whether that transcript was of the**
 7 **deposition in 2007?**

8 A. I don't know the specific date.
 9 It was my understanding, my impression, that
 10 it was more recent. What I saw was a rough
 11 transcript so I take it it was very recent.

12 **Q. Do you know whether it was -- Dr.**
 13 **Hakala was deposed earlier this week. Do you**
 14 **have an understanding of whether it was his**
 15 **transcript from that deposition?**

16 A. I'm -- I couldn't -- I would not
 17 and couldn't want to and I could not vouch for
 18 that but it wouldn't surprise me.

19 **Q. It was definitely a Dr. Hakala**
 20 **transcript from this case, though; is that**
 21 **correct?**

22 A. That was my understanding. It was
 23 only a portion of a transcript so I have no
 24 independent means of knowing that.

25 **Q. Did someone ask you to review this**

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 2 **transcript or this portion of the transcript?**

3 A. Ms. Rodon brought it to my
 4 attention.

5 **Q. And did Ms. Rodon supply you with**
 6 **the portion of the transcript?**

7 A. Yes.

8 **Q. Do you recall what --**

9 MS. RODON: Mr. Schwartz, I'm just
 10 going to object. This is -- any
 11 documents I select to show in
 12 preparation of deposition you know is
 13 work product so I'm just going to object
 14 for the record.

15 **Q. Dr. --**

16 MS. RODON: I let this go far
 17 because I don't think there's any harm
 18 but I just want to be on the record.

19 **Q. Dr. Marais, in the portion that**
 20 **was -- that you reviewed of Dr. Hakala's**
 21 **transcript, can you describe generally what --**
 22 **what was discussed in that portion of the**
 23 **transcript to the best of your recollection?**

24 A. To the best of my recollection, it
 25 was the subject of my report in this case.

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1 **L. MARAIS**

2 Dummy variables.

3 **Q. And do you recall what Dr. Hakala**
 4 **said about dummy variables?**

5 A. I recall dis -- yes, I do.

6 **Q. And what was that?**

7 A. Dr. Hakala referred to work done
 8 by Katherine Schipper. And he also made some
 9 explanatory comments in response to some
 10 questions about the Atkas, et al. article that
 11 is attached to my report in this case.

12 **Q. Were you familiar with the work by**
 13 **Dr. Schipper that he made reference to?**

14 A. Generally. I am -- as a general
 15 matter, yes. I don't have an intimate or
 16 recent or fresh knowledge of it.

17 **Q. Other than the Dr. Hakala -- the**
 18 **transcript of Dr. -- or the portion of the**
 19 **transcript of Dr. Hakala's testimony did you**
 20 **review any other transcripts or portions of**
 21 **transcripts from this case in connection with**
 22 **your deposition today?**

23 A. No.

24 **Q. How about any transcripts of**
 25 **depositions in connection with other cases?**

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2 A. No.

3 **Q. Other than your counsel have you**
 4 **dis -- or other than counsel, have you**
 5 **discussed the -- have you discussed your**
 6 **deposition with anyone else?**

7 A. No. In substance, no. Obviously
 8 I made travel arrangements and stretching the
 9 scope of your question one could say that in
 10 some sense that's the subject of my deposition
 11 but not in substance.

12 **Q. I'm only -- I'm only interested in**
 13 **the substance of it. And I take it that your**
 14 **answer to that is no; is that correct?**

15 A. In substance my answer is no.

16 (Marais Exhibit 1, Rebuttal
 17 Declaration of M. Laurentius Marais,
 18 Ph.D., marked for identification as of
 19 this date.)

20 BY MR. SCHWARTZ:

21 **Q. Just before we turn to this**
 22 **exhibit one more question about your**
 23 **preparation.**

24 **Did you have any conversations**
 25 **with Dr. Hakala in connection with -- in**

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2 **preparation for your deposition today?**

3 A. No.

4 **Q. In the course of your work on this**
 5 **case, have you had any conversations with Dr.**
 6 **Hakala about his work on this case?**

7 A. No.

8 **Q. Have you had any conversations**
 9 **with Dr. Hakala in the course of your work on**
 10 **this case about your work on this case?**

11 A. No.

12 **Q. Generally speaking, since you've**
 13 **been retained -- which we'll get to in a**
 14 **moment -- in connection with this case, have**
 15 **you had any conversations with Dr. Hakala?**

16 A. Yes.

17 **Q. Did those conversations relate at**
 18 **all to this case?**

19 A. Very broadly, yes.

20 **Q. To the extent that they related to**
 21 **this case, can you tell me what it was that**
 22 **you discussed with him?**

23 A. Dr. Hakala told me that the
 24 criticism of his use of multiple dummy
 25 variables in an event study, which I had come

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2 across before, was again in this case an
 3 issue.

4 **Q. Did he say anything else about**
 5 **this case?**

6 A. Not that I can recall, no.

7 **Q. How do you know Dr. Hakala?**

8 A. I have -- I was introduced to Dr.
 9 Hakala in a -- in a previous engagement. In a
 10 different case.

11 **Q. Do you have a -- do you have --**
 12 **other than periodically both being retained as**
 13 **experts in the same case, do you have any**
 14 **relationship with Dr. Hakala?**

15 A. No.

16 **Q. You don't socialize with Dr.**
 17 **Hakala or -- well, let's leave it at that.**
 18 **You don't socialize with Dr. Hakala?**

19 A. No.

20 **Q. Do you have -- other than being**
 21 **experts together on the same case, do you have**
 22 **any professional working relationship with Dr.**
 23 **Hakala?**

24 MR. STRAUSS: Objection.

25 A. None that involves any interaction

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2 between him and me. In some extent we work in
 3 fields that sometimes overlap. So there is a
 4 relationship in that sense but it's not a
 5 personal direct relationship between him and
 6 me.

7 **Q. When was it that you were**
 8 **introduced to Dr. Hakala?**

9 A. I could not answer that with
 10 precision except to say that it's several
 11 years ago. Perhaps -- somewhere in the range
 12 of 2001 through 2004.

13 **Q. And when did you -- the**
 14 **conversation you mentioned about Dr. Hakala**
 15 **telling you that the dummy variable -- the**
 16 **criticism of his use of dummy variables was an**
 17 **issue in this case, when did that conversation**
 18 **take place?**

19 A. At some point during May of 2008.

20 **Q. And how did that conversation come**
 21 **about? Was it a phone call? Was it an**
 22 **in-person -- was it a phone call?**

23 A. Yes.

24 **Q. Did Dr. Hakala call you or did you**
 25 **call Dr. Hakala?**

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A. Dr. Hakala called me.

Q. And other than this discussion about -- about there being criticism of his use of multiple dummy variables, was there -- was that part of a broader conversation or was that the purpose of the conversation?

A. That was the only topic of the conversation that I recall. I can't -- since he called me I can't speak to what the purpose was.

Q. Was it a long conversation?

MS. RODON: Objection.

A. No.

Q. Okay. We've marked as Marais Exhibit 1, a document. Is that document your expert declaration -- your rebuttal declaration in this case?

A. I haven't checked every individual page but it certainly looks like it.

Q. Are there any -- do you have any reason to believe that it's not your rebuttal declaration in this case?

A. No.

Q. Are there any portion -- now, you

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said that in preparation for your deposition you reviewed your rebuttal declaration in this case; is that correct?

A. Reread would be more accurate. But, yes, I reviewed all the sections of it.

Q. In rereading it did you come across any portions of it that you wish to make any changes to?

A. No.

Q. So do you stand by all of the statements and conclusions that are contained in your rebuttal declaration?

A. Based on the information I have here sitting here this morning, yes.

Q. Okay. If you could turn, please, to Exhibit A of your rebuttal declaration.

A. (Witness complies.)

Q. Does this -- does Exhibit A accurately reflect your curriculum vitae?

A. Yes.

Q. Could you briefly walk me through your education from -- from when you attended university through any higher education that you've had?

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A. Yes. I attended the University of Stellenbush in South Africa for a bachelor's degree in computer science, mathematics and applied mathematics. Those were my majors. I attended Stamford University. From Stamford I have a master's degree in statistics as well as a master's degree in mathematics and a Ph.D. in business administration with a minor in mathematics.

Q. And your Ph.D. from Stamford was when? When did you receive that degree?

A. 1985 is the date on my curriculum vitae. I think that's correct.

Q. And from 1985 -- your curriculum vitae lists your employment from I guess 1982 to the present; is that correct?

A. That is correct.

Q. And does your curriculum vitae accurately reflect your employment history during that period of time?

A. I certainly intended it to and I see no mistake as I sit here.

Q. You joined William E. Wecker Associates in 1992; is that correct?

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A. As a full-time employee, yes.

Q. What does William E. Wecker Associates, do?

A. It is a -- it provides consulting services in applied mathematics and statistics.

Q. And consulting services to who?

MS. RODON: Objection.

A. Generally to clients who have problems involving applied mathematics and statistics.

Q. Does it provide consulting services in connection with litigation?

A. Sometimes it does. Often it does, yes.

Q. Does it -- other than litigation, does it provide consulting services in connection with other types of problems that people might need consulting on that -- let me withdraw that.

Other than litigation, what other sorts of engagements does William E. Wecker undertake to provide consulting services?

A. In general problems that private

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or government entities might have in -- that involve applied mathematics or statistics. In other words, what William Wecker Associates does is applied mathematics and statistics and sometimes the projects have some litigation aspect to them but not necessarily so but they always have applied mathematics and statistics. That's the one thing that they all have in common.

Q. I don't want you to tell me any specifics of other types of engagements but can you give me an understanding of what -- other than litigation matters -- what types of engagements William E. Wecker is retained to provide consulting services in?

MR. STRAUSS: I'm just going to object and caution the witness not to reveal any confidential proprietary information that's not in the public domain.

THE WITNESS: Understood.

A. Corporations, for example, who manufacture complex mechanical equipment sometimes find that their equipment fails in

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certain applications and are -- have data, for instance, on warranty claims over a long period of time for different variants of a design manufactured in different ways in different locations. There might then be interest and value to marshalling a body of warranty data and tracking down the hours of exposure of each design variant and each manufacturing source in order to relate such hours of exposure to the number of failures that have occurred or have been claimed against in order to compare rates of failures and in that way to get to the root cause of what -- whether the problem appears to be in a certain manufacturing location or in a certain era of manufacturing with materials, for example, coming from a certain supplier. That would be an example of a statistical analysis involving the marshalling of large bodies of data in order to get to the root cause of where a problem appears to be located in a manufacturing system.

That's one kind of example. There are other kinds of examples that I could give.

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But that would be an application of statistics to the kind of problem a client might bring to us.

Q. So would be fair to say then that in addition to litigation William Wecker Associates sometimes provides consulting services to companies in connection with aspects of their businesses that require statistical consulting?

A. As I have testified, yes.

Q. What percentage of William Wecker Associates' business comes from litigation consulting?

MS. RODON: Objection.

A. It's not a number that I can give you with any precision because it's not a bright line. Sometimes a matter that initially doesn't seem to have any litigation angle turns into litigation.

That said, I would say it's greater than half and probably less than three-quarters but I -- it's not -- it just isn't a number that I track in any systematic way.

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Q. Is it a substantial portion of William Wecker's business?

A. If you consider greater than half substantial, and -- that would be a fair characterization.

Q. Do you consider it substantial?

A. It seems to me greater than half seems to be a substantial fraction but it's not -- again, that's not a label that I use customarily and I -- it depends on one's definitions.

Q. When you joined William Wecker in 1992 you joined as a senior consultant; is that correct?

A. Yes.

Q. What -- and what were your responsibilities as a senior consultant?

A. To apply my expertise and experience to problems on which Wecker Associates had been retained by its clients. In other words, to perform applied mathematical and statistical analysis helpful for solving problems brought to us.

Q. Now, where in the hierarchy of

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William Wecker Associates does senior consultant fall? Is it a senior position or are you reporting to somebody above you when you're a senior consultant?

A. Yes. Both.

Q. Okay. Who does a senior consultant report to?

A. To -- basically to Dr. William E. Wecker who is the president and founder of the company.

Q. So is a senior consultant -- how many levels of the company are between a senior consultant and Dr. Wecker?

A. It is -- the company is not very strictly hierarchical, so for the -- I would say in most cases there is zero levels in between. But in some cases there may be one or two levels depending on who -- depending on who had brought the problem to me in the first place.

Q. Do -- are there people who report to -- who reported to you as a senior consultant?

A. Interpreting reporting to me as

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working under my direct supervision and bringing their results to me, that's how I'm interpreting your question, yes.

Q. And how many -- using your description, how many people -- when you were a senior consultant, how many people worked under you subject to your direction and brought the results of their work to you?

A. The answer to that would depend on the particular project and the needs of -- and it would vary so I -- there's no single number I can give you. Your question perhaps assumes that there is a hierarchy with certain -- with certain people having a fixed reporting channel to me, employed by me as it were, and that's just not how the internal workings of our consulting firm and maybe others are organized.

Q. In terms of an informal reporting relationship, did anyone report directly to you when you were a senior consultant?

A. Yes.

Q. How many such people were there?

A. Understanding that this -- I'm

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providing this answer subject to my previous answer in which I explained that it varied from project to project, on the order of five, six, seven people reported to me at various times. Not all at once. On various matters.

Q. Since -- at some point you became principal consultant at William Wecker; is that correct?

A. Yes.

Q. What point was that?

A. I'm consulting the -- my resume to see whether I list it there. Approximately 1994 would be about -- it was about two years into my time at Wecker Associates.

Q. What's the difference between a principal consultant and a senior consultant?

A. There is perhaps some small difference in status inside the firm. But as a practical matter I'm not sure there is one. I haven't -- I've not detected one.

Q. How many principal consultants are there at William Wecker?

A. There are three or four. There are at least three. And there -- actually,

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there are four that I can think of and perhaps five.

Q. And that number includes you.

A. Yes.

Q. In 1993 your CV says that you became a vice president at William Wecker. What does that signify?

A. It signifies that I became an officer of Wecker Associates but that is an -- that is an administrative issue that stands separately from the designations of principal consultant or senior consultant that we were discussing previously.

Q. And as a vice president in this administrative capacity what are your responsibilities?

A. I'm a little vague on that because I'm not -- I did not detect any change in responsibilities that occurred at about that time. So it is -- I have a general understanding that there is a -- there is a legal requirement for the corporation to have certain officers designated as vice presidents. I'm not -- but -- and I am one of

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those. I didn't notice anything different in the things that I did after that designation from the things I did before that designation.

Q. So the designation of vice president at least in your case doesn't bring with it additional duties or responsibilities that you have to discharge?

A. None that I was not already performing before that designation was made.

Q. How many vice presidents are there at Wecker Associates?

A. There are at least -- there are two that I know of and there may be a third. I'm not sure whether he -- whether the person I'm thinking of has that title.

Q. Is there a president of Wecker Associates?

A. Yes.

Q. And is that Dr. Wecker?

A. Yes.

Q. It says that between 19 -- your CV says that between 1982 and 1991 you were -- you were teaching at the University of Chicago Graduate School of Business; is that correct?

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A. Yes.

Q. Why did you leave teaching at the University of Chicago?

A. I received an attractive offer from Wecker Associates to join that firm.

Q. Are there any other reasons?

A. That's the reason that comes to mind. The primary reason. The west coast -- a secondary reason is that I like living in northern California better than I like living in the midwest?

Q. I can't imagine why that would be?

MS. RODON: Objection.

Q. 1994 to 1998 it says that you were a consulting professor at Stamford Law School; is that correct?

A. Yes.

Q. What were you teaching as a consulting professor at Stamford?

A. Quantitative methods I think was the designation of the course that I taught there. In substance it was applied mathematics and statistics.

Q. Did it cover event studies?

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A. I don't recall. I may have. Under the heading of regression analysis.

Q. Did it cover dummy variables?

A. I just don't recall.

Q. Was there a specific -- was it -- was the teaching of quantitative methods geared to a particular purpose or was it just an introductory type course on quantitative methods?

A. It was an introductory type course aimed at a law school student audience.

Q. Why was a course on quantitative methods being taught at the law school?

MS. RODON: Objection.

Q. If you know.

A. As described to me, the reason was that it was expected that the future lawyers then in training at the Stamford law school might well in their later careers encounter the need for or have to endure somehow the reading of or consultation with experts or technicians in that field and that it would, therefore, be useful to them to have some at least introductory level background in the --

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what were the -- what was the array of techniques and methods and how could they be applied to practical problems. That is, as I say, as explained to me. But whether that was the real purpose or the sole purpose is something that I could not answer. That would be a question for the dean's office at Stamford Law School.

Q. Did you -- were you co-teaching with anybody?

A. Yes.

Q. And who was that?

A. Dr. Wecker.

Q. Do you have any legal training?

A. No. I've met lawyers but I've not taken classes in law or anything that I would consider any formal training.

Q. Does Dr. Wecker have any legal training?

A. None that I am aware of. I know that he also has met lawyers but I don't believe he's attended a law school.

Q. You testified earlier that litigation probably accounts for somewhere

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between 50 percent and less than two-thirds of
Wecker Associates' business.

MS. RODON: Objection.

Q. Do you recall that?

A. I recall giving an answer along those lines. I don't think those were the numbers that I used.

Q. Okay. Could you tell me, then, what -- roughly again what percentage -- not -- let me withdraw that.

Could you tell me again what numbers you used to quantify the amount of litigation work that Wecker Associates does?

A. I attached the preamble that I really don't have an exact number in mind but that it would probably be more than 50 percent and probably less than 75 percent.

Q. In your personal work at Wecker Associates what proportion of your work is litigation related? Is it roughly the same as the numbers you gave me for Wecker Associates as a whole?

MS. RODON: Objection.

A. The numbers that I gave -- the

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numbers that I gave you are based on my own experience at Wecker Associates so yes. And it -- it's a useful caveat to my -- appendix to my previous answer that the answer I gave you is based on my experience at Wecker Associates. But I've made no attempt and I haven't had any reason to try to compile some systematic tabulation for Wecker Associates as a whole.

Q. Have you ever been charged or convicted of any crime?

A. None that -- nothing that rises to the level of crime that I -- in my mind what I'm thinking of is I've had a parking ticket or two.

Q. That doesn't rise to that level in my mind either.

When were you retained -- or let me withdraw that.

When were you asked to begin working in this case on your rebuttal declaration?

A. I believe it was in June.

Q. June of 2008?

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A. Yes.

Q. And that's when you were first contacted?

A. No.

Q. When were you first contacted?

A. In May of 2008.

Q. And at that time who contacted you?

A. It was Ms. Rodon.

Q. And did you have an understanding of why you were being contacted?

MS. RODON: I'm just going to advise the witness not to reveal the substance of any confidential -- or privileged communications that don't relate to your role here as a testifying expert.

A. Would you repeat the question, please?

Q. Yes. Do you have an under -- did you have an understanding at that time of why you were being contacted?

A. Yes.

Q. And what was that?

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A. It was -- I formed the understanding of that conversation that Dr. Hakala was serving as an expert in a case which turns out to be this case. I'm not sure I knew the name of the case at that time; that he had -- that he had performed an event study with multiple -- using multiple dummy variables; that there was some form of criticism or rebuttal of the dummy variables issue; and that I was being asked what I thought of it.

Q. Were you shown anything specific with respect to what criticism of Dr. Hakala's use of dummy variables was at that time?

A. I don't think I had any -- at that time any materials that put -- that showed in writing either what Dr. Hakala had done or what was being said about it in this case. I got those later. Not then.

Q. And the conversation you had with Ms. Rodon, was that before or after the conversation you described before with Dr. Hakala?

A. It was before.

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Q. Do you have a sense of how much before?

A. My recollection is that it was all on the same day. In other words, the -- I don't recall the precise interval. It was not -- it was not two conversations immediately following one another. There may have been an hour or two in between them. My best recollection as I sit here today is that it all happened on one day.

Q. Have you worked with the firm of Kaplan Fox before?

A. No. I -- not to my -- not that I can recall. I don't think so.

Let me add that occasionally I am retained in matters where there are parties involved that I don't even know the names of or there are multiple parties involved and I can't be certain that on every such occasion over the years I've been at Wecker Associates that never was Kaplan Fox involved in any way. I don't know that. But what I am testifying is that I'm not aware of any previous involvement with Kaplan Fox.

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Q. You've never previously been asked by Kaplan Fox to prepare a report or a declaration for a litigation matter.

A. I am virtually certain that that is true. Again, to explain that answer, occasionally I get a call about something -- somebody explains to me some problem that they have and I might say I don't think that's something that I can help with or -- for some reason and such a call may pass without me even ever having clearly understood the name of the firm from which the person was calling.

But, again, my testimony is I have no specific -- I have no recollection of ever being in touch with Kaplan Fox before.

Q. Do you have an understanding of whether Dr. Hakala recommended you to Kaplan Fox in connection with this case?

A. I don't. It wouldn't surprise me. But I just don't have as I sit here -- I don't know how they found me.

Q. Have you ever recommended Dr. Hakala as an expert in a case?

A. I can't think of any occasion on

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which I did that.

Q. Are you being compensated for your time in this case?

A. Indirectly, yes. I am -- I'm a salaried employee of Wecker Associates and Wecker Associates as a professional services firm bills for my time.

Q. What does -- strike that. Do you know how much Wecker Associates is being compensated for your work in this case?

A. Yes.

Q. And how much is that?

A. \$625 an hour.

Q. Do you know whether Wecker Associates has received any payments to date based on your work in this case?

A. Yes.

Q. Yes, you know, or, yes, Wecker Associates has received payment?

A. Yes, I know.

Q. Has Wecker Associates received payment thus far in connection with your work in this case?

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A. They have.

Q. And do you know how much in payment Wecker Associates has received in connection with your work in this case?

A. Not precisely. But I know an approximate number.

Q. And what is that approximate number?

A. It's at or below \$20,000.

Q. Other than the hourly rate that Wecker Associates bills for your time, do you know whether Wecker Associates stands to receive any other compensation in connection with your work in this case?

A. I don't know of any other form of compensation that Wecker Associates stands to receive.

Q. So, to your knowledge, there's no provision for any sort of contingency payment or anything like that.

A. That's correct.

Q. Now, do you know whether Dr. Hakala has ever recommended you as an expert in a case?

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A. Yes.

Q. And has he?

A. Yes.

Q. And what cases -- what case or cases was that?

A. There were two.

MR. STRAUSS: I'm just going to object and make sure that -- remind the witness that he shouldn't reveal nondisclosed consulting arrangements which he may -- that he should not reveal any privileged or work product in connection with matters that -- where he was not a disclosed expert.

THE WITNESS: Understood. Thank you.

A. There were two cases in which I was retained. The case -- they were the Broadcom case that I believe was listed in my testimony list. And an AOL-related case in which I was retained by the Minnesota Board of Investment. Minnesota State Board, MSBI. And it was my understanding that they approached me on the recommendation at that time of Dr.

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Hakala.

Q. In both the Broadcom and the AOL-related case.

A. Yes.

Q. And did you issue a report in the Broadcom case?

A. Yes.

Q. And how about in the AOL-related cases?

A. I believe I did. As I -- I know I issued a report in at least one of those. And I think both.

Q. And what were the topics of your report or reports in those cases?

A. They included the dummy variables issue or one very similar to the dummy variables issue in this case as I understand it in this case. And -- but they ranged more broadly. There were some other also technical topics. I say also technical in that I was commenting and providing opinions on statistical -- on issues concerning the statistical proprietary of certain methods of analysis. I don't recall in detail as I sit

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here what the range of other topics might have been.

Q. You're familiar -- are you familiar with a case called in re. OmniCom Securities Group Litigation?

A. The name seems familiar.

Q. Do you know if you issued a report in the OmniCom case?

A. It doesn't -- I can't rule it out. It was not -- I would have remembered it if it was a major analytical report of a hundred pages. It's possible that I -- I would not be amazed if you showed me a declaration or some relatively short report that I'd issued but I don't remember it clearly as I sit here.

Q. Is it possible that you issued a declaration in OmniCom that discusses Dr. Hakala's methodology?

MS. RODON: Objection.

A. It's possible that -- I can't rule out that there was another matter in which something like the dummy variables came up. But I, again, as I've testified already, the name OmniCom is familiar but I'm just not -- I

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can't bring to mind what involvement I had if any.

Q. Other than Broadcom, the AOL-related case, are there other cases where you have issued declarations or reports discussing Dr. Hakala's methodology?

MR. STRAUSS: Objection.

A. I can't think of any -- any others that would fit that description, assuming you mean by that the same kind of just level of discussion of Dr. Hakala's methodology that I have in this case. Some -- in terms of any broader discussion of Dr. Hakala's methodology I can't recall that I've ever done that.

Q. Are you often retained to opine on the methodology of another expert in a case?

MS. RODON: Objection.

A. It's not unusual.

Q. Are there experts for whom you have issued declarations opining on their methodology more than you have done so with respect to Dr. Hakala?

A. I can't think of any example. I don't think so.

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Q. Dr. Hakala stated in his -- I'll withdraw that.

Do you have any sort of formal agreement with Dr. Hakala?

A. In my mind I have no agreement with Dr. Hakala, whether formal or informal.

Q. Does Wecker Associates have any sort of agreement with a company called CBIZ, C-B-I-Z, Incorporated?

A. Not to my knowledge.

Q. Are you familiar with a company called CBIZ?

A. Yes. In the sense that I have read references to it in Dr. Hakala's reports. But not in -- not in any greater depth than that.

Q. Do you own any shares of CBIZ?

A. Certainly not directly whether -- I don't know who owns CBIZ or of what CBIZ might be a part that may be held by some mutual fund that I do own. But I've no direct ownership in CBIZ.

Q. Do you know if Wecker owns any sort of financial stake in CBIZ?

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A. None that I am aware of. By Wecker, you mean Dr. Wecker? That's what I'm -- that's how I interpreted that.

Q. I was actually referring either to -- let's take that first question as referring to Dr. Wecker. So the answer is not that you're aware of.

A. Not that I'm aware of.

Q. How about the company Wecker Associates? Does Wecker Associates own any financial stake in CBIZ?

A. Again, none that I'm aware of.

Q. And to your knowledge does CBIZ own any stake in Wecker Associates?

A. There I am -- I know that they own -- that they do not own any stake in Wecker Associates.

Q. Do you know whether Wecker Associates has ever paid Dr. Hakala any referral fee for referring you as an expert in any case?

A. I have no knowledge of any such fee and I would be surprised to learn that there'd been anything like that. Certainly

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none that was negotiated or mentioned to -- by me or mentioned to me or of which I have any knowledge at all.

Q. Do you own any AOL securities?

A. None directly. Again, I can't rule out that some mutual fund of which I own a tiny piece may be invested in AOL securities. I just don't know that. But I've no direct stake.

Q. Between 2001 and 2002, did you own any -- any direct stake either by way of security ownership or otherwise in AOL?

A. No.

Q. How long did you spend working on this report?

A. On the order of 15 hours. Maybe 15 to 20 hours.

Q. How does that compare to the declaration you did in the Broadcom case?

A. I really can't answer that. As I sit here the Broadcom case was years ago and I don't even remember the scope of what I wrote there.

Q. How many litigation cases

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approximately do you do in a year?

MR. STRAUSS: Objection.

A. Interpreting that as how many times have I testified in a year on average, in recent years I would say three or four times a year. Probably on that order. Maybe five. It varies from year to year.

Q. And is the number the same if the question is how many times you've issued -- let me withdraw that.

When you say testified or given testimony, did you include in that issuing a declaration or report even if you are not been called to give live testimony at a hearing or in a deposition?

A. No. By testified I meant live testimony of some kind.

Q. On average in the course of a year how many litigation matters do you submit an expert declaration or report in connection with?

A. Again, it is not a number that I have any reason to tabulate and I don't. I don't carry around in my head. It's certainly

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more than the number of times that I actually provide live testimony and is probably twice, maybe three times as many occasions. So ten would not be a -- ten times per year would not be a grossly wrong number. But it varies from year to year. And so ten would not be the right number for -- necessarily for any particular year.

Q. Did anyone assist you in the preparation of your declaration in this case?

A. In substance, no.

Q. What do you mean by in substance?

A. I mean that in terms of any substantive content I wrote -- I decided on and wrote the content. But I did have help in editing, for instance, in and production and proofreading.

Q. Did you do all of the drafts of your report?

A. Yes.

Q. That includes the first draft; you wrote that?

A. Yes. With the under -- with the caveat or the clarification that your question

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seems to imply that there was a first draft and a second draft and so on. And it's a document that evolved from the first sentence I wrote down. But it was in my custody and I wrote it from that first sentence to the final version.

Q. Dr. Marais, what do you understand to be your -- or how would you characterize your areas of expertise?

A. I am an expert in applied mathematics and statistics with a strong background in securities market research which is the field in which I was trained at Stamford University and in which I conducted scholarly research while I was at the University of Chicago. So I know -- I am an expert in certain kinds of accounting, not public accounting, but managerial accounting, and in the application of statistical and econometric methods to security markets analysis, in particular event studies.

Q. Have you ever been retained as an expert to perform an event study in connection with a securities litigation that you then

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issued in the form of a report?

A. I don't recall clearly any such occasion. Although there may have been one or even a handful of occasions. But as I -- certainly none recently. And I -- so -- and in order to be clear about what I am referring to now, I understand your question as being have I ever been the primary sponsor of an event study that I myself crafted in a securities litigation context and presented in the form of testimony or of an expert report in a litigation context. I -- and that's -- that's the understanding in which I gave the answer that I gave.

Q. Have you ever otherwise been retained as an expert in a securities related litigation to opine on the effects of a particular statement or set of statements on the price of a security?

MS. RODON: Objection.

A. I have. Yes, I believe I have.

Q. And what case or cases was that?

A. There were some cases really quite a long time ago in the '90s involving I think

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ThreeCom -- I think that's the name of a company that was producing modems and computer communications equipment. There were -- and at the time there were two or three other similar matters I believe in which I was asked to give an opinion of the kind that you've just referred to.

None recently. But some time ago, yes.

Q. Have you ever been asked as an expert to opine on the effects of research analysts' statements on the price of a particular firm's securities?

MR. STRAUSS: I'm just going to object and just caution the witness -- the way I understood your question is where he gave a public opinion.

MR. SCHWARTZ: That's correct.

MR. STRAUSS: As opposed to a nondisclosed consulting.

MR. SCHWARTZ: That's right.

Q. I'm only asking about an instance in which you've issued an expert report or given live testimony or a declaration or

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A. That is how I understand the question. And that's how I understood your previous questions. And I assume unless you tell me otherwise in follow-up questions that's the understanding under which I will answer.

I don't recall a case as I sit here in which that was the -- the primary matter on which I was being asked to opine.

I am fairly sure given the nature of the subject matter that it has come up but in ways that seem to me to be peripheral to the main thrust of what I was doing. But I don't -- I don't recall a case in -- that I -- that seems to me to fit the characterization in your question.

Q. Are you familiar with the academic finance literature on the effects of research analysts' statements on the prices of securities?

A. I'm familiar with some of it, yes.

Q. And --

A. And as a footnote it's sometimes

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unclear whether one should call it academic finance literature or accounting literature. But I am -- I'm generally familiar with so-called information content research.

Q. And how did you become familiar with that research?

A. It is research that was conducted -- some of which was conducted by faculty colleagues of mine in the years I was a full-time academic. It was certainly all around me in my office and in the offices of my colleagues at the University of Chicago and as Stamford University. It's a standard kind of topic in empirical finance and accounting research.

Q. And other than since you've left Chicago have you kept up to date on that research?

A. As a general matter, yes. By which I mean that I don't follow that line of research as a -- in order to maintain a specialist level of knowledge in it but I'm generally aware of -- I'm still a member of relevant professional societies and I see

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their journals and so -- and colleagues and friends of mine still do it. So, yes, I'm generally familiar with it.

Q. Have you read any case -- legal case opinion relating to the effects of analysts' statements on the price of a particular firm's security?

A. As in opinions issued by courts.

Q. Yes.

A. Most surely, yes. Although I can't think of -- I can't identify specific example. I've read many opinions and I'm sure some of them had to do with this topic.

Q. Have you read any such opinions in connection with your work in this case?

A. No.

Q. Have you read the district court's opinion in this case on the motion to dismiss?

A. No.

Q. Have you read any of the complaints in this case?

A. No.

Q. Do you have an understanding of what the allegations in this case are?

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A. Not at the level that I would wish to try to explain. I do not have a clear understanding of the allegations in this case beyond the sort of understanding that I -- beyond the level of familiarity that I got from a very quick perusal of the portions of the Stoltz and Hakala reports, outside the scope of what I was actually looking at for my opinion in this case.

Q. In preparing your rebuttal declaration in this case did you make any assumptions about various facts in forming your opinions?

MS. RODON: Objection.

A. That seems awfully broad and so broad that it almost seems as if the answer has to be yes although I can't point to any. Perhaps you could make that a little narrower and I can give you a clean yes or no answer.

I assume that we -- that standard principles of statistics and mathematics would continue to apply in this case as they do in other cases; that there wasn't some special suspension of the rules of logic. Those are

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assumptions but they did not occur to me as special assumptions that I was making for the purpose of my report in this case.

Q. Other than assumptions about the laws of statistics remaining what they normally are and the like, does your rebuttal declaration depend on any particular factual assumptions in order for you to be issuing the opinions that it contains?

A. None that I can think of as I sit here in response to your question. I can't think of any particular fact concerning allegations in this case, for example, that I am assuming true. It may be that as we go through my opinions, if we go through my opinions, that something will occur to me that does seem to fit your question. Although it does not occur to me now. And if it does, I will find a way to raise it then.

Q. Could you turn to paragraph 3 of your report, please.

A. Yes. I'm there.

Q. Does paragraph 3 accurately represent the questions that you were asked to

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opine on in this case?

A. It is certainly what I intended with paragraph 3. Having reread paragraph 3 yesterday I don't notice anything that I would want to say differently. Paragraph 3, however, to be clear, those are my words. That's my characterization of what I understood that I was being asked. It's not a verbatim question or a restatement of words that I -- in which a question to me were formulated -- was formulated.

Q. Other than the questions that you formulated as they appear in paragraph 3, were you asked to opine on any other issues in this case?

MS. RODON: Objection.

A. Nothing that I can think of. I think this captures it.

Q. So all of the questions on which you were asked to reach an opinion in this case are reflected in paragraph 3 of your rebuttal declaration.

A. Yes. I cannot think of anything -- of anything that I was asked to do

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that doesn't fall within the scope of what I have formulated as this three-part question request.

Q. And do paragraphs 5, 6 and 7 of your declaration accurately reflect the opinions you've reached in this case?

A. They accurately summarize the opinions that I've reached. I have -- there are reasons for the opinions. And, of course, the reasons that appear in this summary section. But, yes, these are a fair summary of my opinions.

Q. And is the first opinion that you express that -- well, let me withdraw that.

You've read Dr. Hakala's expert report in this case, correct?

A. Yes. With the qualification that I have -- I have paged through the entire report but glossed over pages that did not appear to me to deal with the specific issue on which I was asked to point. So, yes, I have -- I have at least looked at every page in order to determine whether it involved a discussion of Dr. Hakala's event study

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formulation and the way in which he used dummy variables in that formulation. If the page appeared to have content about that I read it with close attention. Otherwise, I noted the subject matter and moved on.

Q. Now, in your review of Dr. Hakala's expert report in this case subject to the type of review you just testified to, did you encounter any portions where Dr. Hakala opines on whether his dummy -- his use of dummy variables is proper or appropriate?

MS. RODON: Objection.

A. I would -- yeah, I would say the answer is yes. I don't recall that he uses those words or exactly that formulation but in substance there are such portions of his report.

Q. And, again, in your review of Dr. Hakala's expert report does he discuss an article by Atkas, et al. and state that his use of dummy variables is consistent with the methodology of Atkas?

MS. RODON: Objection.

A. I recall that Dr. Hakala makes

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reference to Atkas. I do not recall anything that rise -- in my view rises to a level of a discussion as you put it of Atkas, et al. Dr. Hakala makes reference to Atkas as I recall it as being supportive of what he's doing but whether he uses the word, the exact word "consistent with" I just don't recall.

Obviously, I'm assuming you're not -- you don't intend this to be a memory test and his report is his report and it says what it says. I don't -- whether I remember his using that word or not.

Q. I'm not asking you to -- whether you remember him using a specific word or not. I'm asking generally with respect to the substance of his report.

And with that clarification, does he indicate in his report that his use of dummy variables is consistent with his understanding of the academic literature on event studies or generally?

MS. RODON: Objection.

A. I would -- it -- that appears to me to be consistent with what I understand Dr.

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Hakala's position to be, but I really can't testify about -- that really seems to be a question to Dr. Hakala, not to me. That's the impression that I get. The understanding that I get from reading his report.

Q. And from reading his report do you also understand that Dr. Hakala discusses that his methodology with respect to dummy variables is not arbitrary and that it's reproducible?

MS. RODON: Objection.

A. I certainly don't recall him describing it as arbitrary. And I -- I don't recall that word coming up one way or the other.

And as to reproducible, I don't recall what he says about reproducible. He describes a protocol or a procedure for how he conducted his method. And I don't recall the subject of reproducibility or degrees of reproducibility from Dr. Hakala's report. Perhaps it's there. I don't recall as I sit here at this moment.

Q. But, again, you haven't read his

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rebuttal declaration in this case; is that correct?

A. I have read one -- as I testified earlier, I've read one document authored apparently by Dr. Hakala and that's the one I'm referring to. It's the one that I cite and identify by date in an appendix to my report.

Q. So it's possible that in his rebuttal declaration Dr. Hakala may in fact discuss whether his methodology is reproducible but you just don't know one way or the other?

MS. RODON: Objection.

A. I don't even -- since I have not read such a document and have no independent basis for knowing that it exists, I would have to say anything is possible.

Q. With respect to the points that you express in paragraphs 5 and 6, how do those add to anything Dr. Hakala says in this case?

A. I'm just rereading it.

Q. Sure.

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(Document review.)

MS. RODON: Objection.

A. Dr. Hakala used multiple dummy variables in a certain way in his analysis in the report that I read. He describes having used them in a certain way. I've also read a report by Dr. Stoltz in this case in which he says Dr. Hakala's use of dummy variables in the particular way in which he used them is inappropriate, that it is inconsistent with, not supported by academic literature, and that it -- Dr. Hakala's report is flawed and his results biased as a result of a way that he implemented and used the dummy variable apparatus.

Clearly, if Dr. Stoltz is correct in his criticisms, that undercuts and tends to undue to validity of Dr. Hakala's analysis in this case. I have reviewed in detail what Dr. Stoltz said and I find that it is in fact incorrect on these points.

That makes a difference. It makes the difference between Dr. -- whether this criticism by Dr. Stoltz is effective in

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removing the validity of a certain portion of Dr. Hakala's analysis or not. So I'm weighing in on a question that goes to the correctness of a certain methodological point in Dr. Hakala's work. That's the difference it makes. And that's what it adds.

Q. If I told you that Dr. Hakala did submit a rebuttal declaration in this case and he addresses Professor Stoltz' criticism of his methodology would you believe that your rebuttal declaration adds to Dr. Hakala's -- the validity of Dr. Hakala's methodology?

MS. RODON: Objection.

A. I could not possibly know that just from your -- the premise of your hypothetical that Dr. Hakala has submitted a rebuttal report. For one thing I am not Dr. Hakala and so there would be some weight to the fact that an additional third-party has looked at this and weighed in in a certain way. If by some miracle you told me that every sentence I had written here and every citation that I had given to the particular articles that I cite here had been included

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verbatim in somebody else's rebuttal report then I would have to say the two reports -- each is redundant with respect to the other. But you haven't told me that so -- and you haven't -- you haven't put enough in the question for me to give you an informative answer one way or the other.

Q. Is it your view that your -- that the only way your -- let me withdraw that.

Other than the additional weight that comes from having an additional person opine on the validity of Dr. Hakala's methodology, is it your view that the only -- I'll withdraw that.

Is it your view that the only way Dr. Hakala's report, rebuttal report that we're talking about, and your rebuttal report would cover identical material is if your report sentences appeared verbatim in Dr. Hakala's report?

MS. RODON: Objection.

A. That would be the starkest way. It's possible I suppose that one could have a paraphrase of exactly the same points but with

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slightly different words but we seem to be in awfully abstruse hypothetical territory.

I would also add that in terms of the weight, that the weight comes not merely from -- it is the sentences that matter. The weight does not come from any -- from sheer authority. That's not what I'm claiming or suggesting.

The weight comes from the considerations that I have set forth and citations and the quotes that I have given. And that's where it comes from.

Q. It's possible Dr. Hakala could have opined on -- I'll strike that.

How do you -- we've talked about dummy variables a little bit today. How do you -- what's a dummy variable?

A. Dummy variable, sometimes called an indicator variable in statistics, is a numeric coding usually in the form of zeros and ones alone usually meant to represent in a mathematical or statistical model the presence or absence of a certain condition.

For example, a dummy variable can

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represent, as it does in this analysis, the occurrence of a news release or an information event of a certain kind.

Q. And do you have an understanding of how Dr. Hakala uses dummy variables in his expert report in this case, the one that you've read?

A. Yes, I do.

Q. And can you describe your understanding, please?

A. Certainly. Dr. Hakala uses for his event study a statistical apparatus called a market model which is a form of regression model that explains the returns to AOL securities, that's the daily -- the trading daily rate of return on the security, as a function of several variables that -- since this is a regression model I'll call it the right-hand side variables. The explanatory variables. Those include, like most market models, a market index variable as well as an intercept. There are also, too, other industry type intercepts in the model. And then there are information event dates defined

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2 by -- and identified by Dr. Hakala in a
3 certain way.

4 There is -- for each of those
5 information event dates there is an additional
6 variable in the model. And that is a variable
7 that takes the value zero for every day in the
8 sample period except the one day of the
9 information release itself. The one trading
10 day. And on that day that dummy variable
11 takes the value -- is given the value of one.

12 Dr. Hakala uses -- then performs
13 regression calculation that produces
14 coefficients of all of these variables. That
15 is numbers that multiple those variables in a
16 formula. For certain of those information
17 event days, those coefficients are important
18 to his analysis in that they measure effects
19 that he is concerned about or that he views as
20 relevant to -- as measuring things that are
21 relevant in this case. For the majority of
22 event days, the coefficient does not enter
23 further into this analysis. The function of
24 the dummy variable is exactly the same as
25 simply dropping that day from the estimation

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2 data. It is just a way of ensuring that the
3 day does not affect the measurement of
4 anything in the regression model.

5 **Q. And so does Dr. Hakala's use of**
6 **dummy variables effectively reduce the period,**
7 **the estimation period over which he is**
8 **performing his regression?**

9 MS. RODON: Objection.

10 A. It effectively removes certain
11 days from the estimation period, the days of
12 information releases.

13 **Q. And those days of information**
14 **releases, are those -- do you have an**
15 **understanding of whether those are the days**
16 **that Dr. Hakala refers to as containing**
17 **potentially material events?**

18 A. I think I recall him using that
19 formulation. There's no -- when I say I think
20 I recall him using that formulation I'm not
21 sure I've got exactly the right -- exactly the
22 same words that he used. Those sound familiar
23 to me. I don't think there's any ambiguity
24 about which days we're talking about.
25 those -- we are talking -- I am talking about

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2 the days for which Dr. Hakala added dummy
3 variables, indicator variables to his market
4 model.

5 **Q. If I refer to those days as**
6 **potentially material days will you understand**
7 **that those are the days I'm talking about?**

8 A. I will try to keep in mind that
9 you are referring to days identified by Dr.
10 Hakala in the way that I've just testified to.

11 **Q. Do you know how many potentially**
12 **material days Dr. Hakala accounts for using**
13 **dummy variables in his regression?**

14 A. It's something over 200.

15 **Q. Would you be surprised if I told**
16 **you it was about 214?**

17 A. I would not be surprised if you
18 told me it was about 214. Approximately.

19 **Q. And do you know how long -- how**
20 **many trading days were in Dr. Hakala's**
21 **estimation period prior to his removal of**
22 **those approximately 214 days with dummy**
23 **variables?**

24 A. I'm not sure that Dr. Hakala
25 identifies what have ever anywhere what would

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2 ordinarily be referred to as an estimation
3 period. I think what you're -- I'm going to
4 interpret your question as meaning how many
5 days there were in the data in the sample of
6 trading days, the initial sample of trading
7 days be -- used in the Hakala calculation and,
8 yes, I do.

9 **Q. And how many days was that?**

10 A. As reported by Dr. Hakala it was
11 388.

12 **Q. And do you know what percentage**
13 **214 is of 388?**

14 A. Actually not offhand. I know how
15 to work that out but I don't know the answer
16 as I sit here.

17 **Q. It wouldn't surprise you to learn**
18 **that it's approximately 56 percent?**

19 A. That's not obviously wrong on its
20 face but I can't vouch for it.

21 **Q. In paragraph 11 of your report, if**
22 **you could turn to that for a second and just**
23 **take a look.**

24 A. (Witness complies.)

25 **Q. You write, "Dr. Hakala chose to**

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exclude from the estimation period data used for his event study any date containing a material event concerning AOL."

Do you see that?

A. Yes.

Q. When you refer to an estimation period in paragraph 11 are we talking -- are you talking about the same period of 388 days that we were just talking about?

A. More or less. There are some -- there are some complications concerning what exactly one means by an estimation period as opposed to a target period or a test period. It's not vital to the point that I'm discussing here. And so I -- I wouldn't want to give you a simple plain yes because that would seem to gloss over some things that indeed I did gloss over in what I am saying here. There is -- I'll leave it at that unless you want to --

Q. Well, I just want to understand, you're using the term estimation period in paragraph 11, correct?

A. Yes.

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Q. What do you mean by estimation period when you use it in paragraph 11, if it's not the 388 day period we were just talking about?

A. I mean estimation period as that term is ordinarily used in the context of an event study. And I -- if you want me to I could explain that and how it fits in.

Q. Well, were you referring to an estimation period used by Dr. Hakala in paragraph 11?

A. Yes.

Q. And is that estimation period different from the 388 day trading period -- trading day period that you and I were just talking about?

A. In the -- yes, in the ordinary -- if one interprets that as the ordinary -- in the sense in which that term is ordinarily used in event studies.

Q. What are the differences between the estimation period used by Dr. Hakala that you are referring to there and the 388 day trading period -- trading day period that you

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and I were talking about a few moments ago?

A. I can -- I think to close the issue, it's best if I explain the answer to your question as follows: Ordinarily in an event study there is an estimation period during which -- that is used for the sole purpose of calculating or estimating statistically the parameters of the market model. That means that the coefficients of the right-hand side variables as well as the standard error of the regression, the remaining -- the unexplained portion of the regression model.

Ordinarily, that is defined as one section of the data of the event study and a separate non-overlapping portion in the ordinary usage of event study language is the test period or the -- the event period when the actual event effect is being measured.

That distinction certainly appears in Dr. Hakala's analysis in this case but it's implicit because he didn't use the language that way. Dr. Hakala refers to a single sample of 388 observations. Those 388

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observations contain both the estimation period as I've defined it for you and the event period.

The effective event period or the -- yes, the effective event period and the implicit estimation period in Dr. Hakala's analysis together don't add up to the 388 days because there are also the days associated with dummy variables that are not associated with events that are relevant to this case and are effectively -- I think the term that is -- has been used -- that Dr. Hakala may have used is dummied out using dummy variables. So there is -- amongst the 388 days there are event days relevant to this case, there are -- there is an implicit estimation period and there are days that are simply dummied out for the reasons that I have testified to.

I hope that explains the answer to your question.

MR. SCHWARTZ: Okay. Let's take a five-minute break so that the videographer can change the tape.

THE VIDEOGRAPHER: We're now going

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2 off the record. The time is 11:20 a.m.
3 (Recess taken.)
4 THE VIDEOGRAPHER: I'm going to
5 ask you to stand by, please.
6 We are back on the record. The
7 time is 11:36 a.m. This is the
8 beginning of the tape labeled number
9 two.
10 BY MR. SCHWARTZ:
11 **Q. Dr. Marais, before the break we**
12 **were discussing your definition of estimation**
13 **period in paragraph 11 of your declaration.**
14 **And I just have a few more questions about**
15 **that.**
16 **What I understood you to be saying**
17 **in your last answer is that Dr. Hakala -- your**
18 **understanding is Dr. Hakala starts with this**
19 **388 day -- trading day period. Out of that**
20 **388 days he dummies out 214 or approximately**
21 **214 days and on what's left, that is the**
22 **period that you're using when you refer to the**
23 **estimation period in paragraph 11. Is that**
24 **about right?**
25 A. That's about right, yes.
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2 **your work in this case?**
3 A. It certainly looks like it. The
4 pages that I just reviewed briefly look quite
5 familiar to me. So I have no reason to think
6 this is not the report and it certainly looks
7 like the report I reviewed.
8 **Q. Can you direct your attention to**
9 **page 27, paragraph 30 of the report.**
10 **Twenty-seven. I am referring to the number in**
11 **the lower right-hand corner of the page.**
12 A. I'm there.
13 **Q. And is this the paragraph that you**
14 **recall in which Dr. Hakala explains how he**
15 **selects the days for which he's going to use**
16 **dummy variables?**
17 MS. RODON: Objection.
18 A. It is certainly a key paragraph
19 that I recalled in that connection. I'm not
20 sure it's the only one. But it is -- it's an
21 important one. Along, of course, with the
22 footnotes that are cited in that paragraph.
23 That are identified in that paragraph.
24 **Q. In your view in testing the**
25 **validity of particular methodologies is it**
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2 **Q. Now, do you have an understanding**
3 **of how Dr. Hakala selected the approximately**
4 **214 days he uses dummy variables for?**
5 A. I have the understanding that
6 comes from reading his report.
7 **Q. And what is that understanding?**
8 A. That he set about identifying
9 certain categories of news days that he lists
10 not in exhaustive detail but at least
11 generically by category in his report.
12 Again, I assume this is not a
13 memory test. His report says what it says. I
14 don't recall verbatim what the categories are.
15 The most important words are a priori.
16 (Marais Exhibit 2, Expert Report
17 of Scott D. Hakala, Ph.D., CFA, marked
18 for identification as of this date.)
19 (Document review.)
20 BY MR. SCHWARTZ:
21 **Q. Dr. Marais, have you seen this**
22 **document before?**
23 A. Yes.
24 **Q. Is this the expert report of Dr.**
25 **Hakala that you reviewed in connection with**
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2 **important for the methodology to be**
3 **reproducible?**
4 MS. RODON: Objection.
5 A. Very generally that is a -- one of
6 the hallmarks of a scientific procedure, its
7 replicability. What one means by reproducible
8 and the degree of reproducibility that is
9 necessary to pass that threshold is -- it
10 depends on the context. So it's important to
11 have that understanding.
12 But subject to that qualification,
13 yes, reproducibility is an important feature
14 of a valid, albeit defensible procedure.
15 **Q. And what degree of replicability**
16 **or reproducibility do you believe that a**
17 **procedure requires in order for it to satisfy**
18 **that hallmark?**
19 MS. RODON: Objection.
20 A. I do not have in mind a single one
21 recipe fits all circumstances with a single
22 bright line kind of statement that I can give
23 you in response to that. It rather depends on
24 the -- on the specific context. As I
25 testified to in my previous answer.
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Q. In the context -- have you ever served as a referee for academic journals?

A. Yes.

Q. Do you ever evaluate any papers involving event studies in that capacity?

A. I have done so.

Q. In serving as a referee on an academic journal when you were evaluating papers involving event studies, what degree of replicability would you have required or did you require in order to ensure the validity of the procedures discussed in those articles?

MS. RODON: Objection.

A. Your question has two parts. One is what degree did I require and what degree otherwise you say would I require. On the did I -- what degree did I require, I don't have a clear recollection as I sit here of how that issue may have come up in my -- in any specific refereeing assignment that I have had. I haven't done refereeing for some years. Although I refereed many journal articles when I was closer to my academic years or actually a full-time academic.

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But I -- so I can't as I sit here today explain the -- how -- how exactly that issue played out in any specific actual refereeing assignment.

How it would play out, the other half of your question is that it would -- exactly as I have already testified; it would depend on the context of the event study, what it was being used for. There is no -- there is no -- I've testified already there is no single recipe that I can give you that -- a one size fits all kind of recipe.

Q. Well, let's say two researchers -- I mean, let's say two -- I'm giving you a hypothetical here. Let's say two researchers purported to use the same methodology in performing an event study and their results were 75 percent -- that there was a difference between their results of 75 percent.

Knowing nothing else would you be able to say that that satisfies -- that that procedure is replicable?

MS. RODON: Objection.

A. Knowing nothing else I don't think

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I could -- I can't give you any answer to the hypothetical because the hypothetical isn't meaningful yet. You have not -- you've said their results are 75 percent different but you've not -- 75 percent means that there must mean that something in the story when divided by something else in the story gives you the answer 75 percent. But since I have not the slightest notion from your hypothetical of what those two somethings are, there is -- the hypothetical with respect is meaningless and I can't give you a meaningful answer.

Q. So then is it possible -- still sticking with this hypothetical, is it possible that you could have a procedure which varies 75 percent between how it's applied by two different researchers and you would consider it replicable?

MS. RODON: Objection.

A. It would, as I have testified repeatedly, depend on the circumstances. There are -- to clarify that, there would be many circumstances in which a range of variation in some thing which you have not

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defined yet as great as 75 percent might be an unacceptably large variation. And to provide some of the specificity that your -- in my answer that your hypothetical lacks, if there were two procedures, for example, two statistical procedures for determining the population of the United States and one of them came up with an answer of 400 million people in the United States and the other procedure came up with -- or someone else's attempt to implement the same procedure produced an estimate of 100 million people living in the United States, for most purposes that would be an unacceptably wide range of variation that would call into question why -- why such a large range.

On the other hand, if the -- if the object of the exercise were to determine a census of bacteria on some surface and the only question of interest was whether there were many bacteria on that surface or it was sterile and free of life and the range of variation between two procedures for detecting this microscopic life form were between 100

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million and 400 million bacteria living on the surface there would be broad agreement between the two implementations that this is a highly contaminated surface with a very large population of bacteria living on it.

So for one purpose that range might be unacceptable. For another purpose it might be acceptable for the purpose for which the exercise is being conducted. There is not enough in your hypothetical for me to know which of those cases we're in.

Q. With respect to Dr. Hakala's selection of material event days, those days that he used dummy variables for, did you consider what an acceptable level of replicability would be or is for the procedure he used to identify those days?

MS. RODON: Objection.

A. In the most general terms, yes. The terms that are similar in generality to my answers here. In concrete detail coming down to a number like 75 percent of some unspecified quantity or 22 percent or some other percentage, no.

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Q. Did you reach an opinion on whether Dr. Hakala's -- well, let me ask this.

If Dr. Hakala's -- if a different researcher purporting to employ the criteria set forth by Dr. Hakala in paragraph 30 in note 14 of his expert report in this case -- so if a different researcher were using those criteria and came up with a different set of material event dates that was 75 percent different from what Dr. Hakala came up with, would you consider Dr. Hakala's criteria to be replicable?

MS. RODON: Objection.

A. Interpreting the question as to whether reasonable implementations of the procedure by qualified researchers produced exactly the same result, in that -- if that's what you mean by replicable, of course not. In your -- as you have stated the hypothetical.

In terms of what final and relevant conclusion Dr. Hakala draws from all of this, I have no way of knowing. Dr. Hakala draws conclusions I understand. I've not --

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those are not within the scope of my work, but he does draw conclusions from this event study. The set of days of potentially material events doesn't stand on its own as an end point of the work that Dr. Hakala does in this case. If it were the case, and I treat this as a hypothetical, I have no reason to think that it is so, but if it were the case that reasonable implementations of the fully specified protocol which I don't think we have in this one footnote, led to widely different sets of dates, it would still not tell me whether that range of variation that I've described as widely different was different enough to make any material difference to the end result, the conclusion that is drawn from the event study that is relevant to this case.

That is a calculation that I've never performed and it's not anything that I can -- I can know the outcome of in this hypothetical.

The way to know it would be to do it and to trace through to the very end every -- every way in which an opinion depends

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-- or a conclusion that's relevant to the issues in this case depends on the whole event study analysis.

You could not get there by calculating percentages of dates that match between two implementations. It just...

Q. So is it your view that without knowing what effects Dr. Hakala's selection of material event date has on the final result of his event study, you can not determine whether his protocol for selecting those material events is replicable or not?

MS. RODON: Objection.

A. You cannot -- it is my view that you cannot tell without tracing whatever range of variation happens to occur in the implementation of the event selection protocol without tracing that through to its consequences for final opinions or for final -- for ultimate conclusions, you cannot know whether the range of variation is unreasonable or is too great. Or is --

Q. And by un -- I'm sorry.

A. Or is great enough to have any

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material effect on ultimate conclusions.

Q. Is it -- when you say material effect on ultimate conclusions, is that what you mean by replicable?

A. That -- no, that's not a definition of replicable. But it is -- I suppose fleshing out your question, it is how I am interpreting what I under -- what I have understood to be the intent of what you're asking me. I think you're asking me to be clear about scientific replicability and recognizing that there are many procedures in the hard sciences and in statistical analysis that don't yield exactly identical results from one implementation to the next, I am -- I've been trying to give you an informative answer to the question of what is a reasonable degree of replicability in the circumstances.

Q. I believe you testified that you didn't -- it was outside the scope of your expert opinion in this case whether Dr. Hakala's selection of material event dates, how that affected his final conclusions that he draws from his event study; is that

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correct?

A. As I interpret that statement, yes.

Q. And I also believe you testified -- it's my understanding of what you testified that without doing that analysis you cannot say whether his protocol for selecting material event dates is scientifically replicable or not.

MS. RODON: Objection.

Q. Is that correct?

A. More or less. I would not -- those are not words that I would choose. I would say whether his protocol, fully fleshed out protocol, for selecting potentially material events is sufficiently replicable for the purpose for which he uses it in this case.

Q. So is it correct, then, that you have formed no view as to whether Dr. Hakala's selection of material event dates is sufficiently replicable for the purpose for which he has used it in this case?

A. It is fair to say that I have no expert opinion one way or the other about the

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degree of replicability of Dr. Hakala's protocol. It's simply not anything that I have looked into. It's outside the scope of what I have looked into in this case.

Q. So could you take a look at paragraph 7 of your expert report, please.

A. (Witness complies.)

Yes.

Q. So is it fair to say that the opinion that you express in this paragraph is simply that you believe that Dr. Stoltz has not established his criticism of Dr. Hakala but not that Dr. Hakala's procedure for identifying material event dates is in fact replicable?

MS. RODON: Objection.

A. Consistent with my previous answer, yes. I have -- I have not looked into replicability of the procedure. I have looked into Dr. Stoltz' report and noted that he tosses off a speculation about the replicability without providing any -- any basis for the opinion that he states.

Q. Is it possible that Professor

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Stoltz and you are using different definitions of replicability?

MS. RODON: Objection.

A. I'm not sure -- or you might be able to point me to an exception but I don't recall as I sit here that I used the term replicability in my report in this case.

And I don't recollect as I sit here that Dr. Stoltz uses the term replicability in his report. So your question with respect is somewhat baffling in that I don't know from my exposure to materials in this case that either one of us has stated a definition or has -- necessarily has a definition of that term in mind.

Q. Okay. Using the terminology you have in paragraph 7, is it possible that you and Dr. Stoltz or using different definitions for the term nonidentical results in your respective expert reports?

MS. RODON: Objection.

A. I can only testify about what I meant by nonidentical. I meant nonidentical in the plain English sense of nonidentical

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means two sets of dates are identical if they're exactly the same. If they are not exactly the same then they are nonidentical and my opinion here is that Dr. Stoltz has in his report in this case provided no basis for the claim that different researchers -- for assessing any extent to which different researchers would arrive at different outcomes. In fact, as his own language that I've quoted here "quite likely" will produce nonidentical results.

There's simply no basis in Dr. Stoltz's report. It's not that it would be impossible to produce -- to do the work and produce some basis and only then would the considerations that I have testified about previously about a sufficient degree of replicability come into play.

But Dr. Stoltz's criticism on this point doesn't even reach that point.

Q. Is it your view that his criticism on this point doesn't reach that point however because it's your view that Dr. Stoltz doesn't trace differences -- or how the differences

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he's talking about in the selection of material dates, how those differences would impact the final results that Dr. Hakala has used his event study in this case for?

MS. RODON: Objection.

A. No. My testimony in my previous answer was -- in my testimony in my previous answer what I meant to convey is this: We don't even have from Dr. Stoltz's report examples of different outcomes from applying the Hakala recipe, the Hakala protocol.

We don't -- I don't understand from Dr. Stoltz's report that he has any specific basis for pointing to a degree of variation amongst different implementations. He simply states blandly that it is quite likely that there will be differences but he doesn't talk about degrees of difference and much less does he talk about degrees of difference in terms of what I consider the relevant metric which is the ultimate conclusion that is drawn from the exercise.

Q. I'm trying to understand -- is it your view that Professor Stoltz doesn't give

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any examples of differences between different implementations of Dr. Hakala's selection of material event dates?

MS. RODON: Objection.

A. That is my understanding from my review of Dr. Stoltz's report that he -- he mentions in his report the -- what he -- what I will characterize, and I'm not quoting verbatim, as his view of the peculiarity of the treatment of a certain event by Dr. Hakala's -- I think he says perhaps it's difficult to understand.

But he doesn't get close to a statement along the lines of I, myself, Dr. Stoltz, performed this procedure attempting as best I could to follow the guidance given by Dr. Hakala or I directed someone working for me to do it and we arrived at the result which in your hypothetical number is 75 percent different. I don't recall finding anything along those lines in Dr. Stoltz's report. If it's there I missed it.

Q. You did some work, you testified earlier, in connection with Dr. Hakala's work

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in an AOL-related case. Do you recall testifying to that?

A. Previous to this case, yes.

Q. Previous to this one, yes.

A. Yes.

Q. Okay. Did Dr. Hakala perform an event study in that case, do you recall?

A. My somewhat vague recollection as I sit here today, since I haven't looked at that in a really long time, is yes.

Q. Do you know whether Dr. Hakala employed the same criteria for selecting material event dates in that case?

MS. RODON: Objection.

A. I don't know that with precision. I do recall that one of the citations that Dr. Hakala gives here, namely in Ryan -- the citation to Ryan and Taffler -- is familiar to me I think from that case. So I believe he used that citation and -- but I have no basis as I sit here for either testifying that it's exactly the same or for pointing to differences.

(Marais Exhibit 3, Affidavit of

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2 Scott D. Hakala, Ph.D., CFA, marked for
3 identification as of this date.)
4 BY MR. SCHWARTZ:
5 **Q. Dr. Marais, have you seen the**
6 **document that's been marked Marais Exhibit 3?**
7 **Have you seen that document before?**

8 A. Frankly I don't know. I see that
9 it's in Time-Warner Securities Litigation.
10 But looking at the cover page of this document
11 I don't know if I've seen it before and I'm
12 not sure if I read the whole thing whether I
13 could be sure one way or the other whether I
14 had seen this specific document before. I
15 don't know.

16 **Q. Could I direct your attention to**
17 **paragraph 4 on page 3 of the document.**

18 A. Okay. I see that.

19 **Q. Do you recall consulting with Dr.**
20 **Hakala on his -- on the -- on the document**
21 **that has been marked Marais Exhibit 3?**

22 A. I recall working with Dr. Hakala
23 in this case as I have indeed testified more
24 than once today already. I don't recall
25 working with Dr. -- I don't know whether I did

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2 work with Dr. Hakala on this document in any
3 way that I would characterize in that way.
4 And I don't -- I'm not sure how to read the
5 sentence, "I have also consulted with Dr. M.
6 Laurentius Marais of William E. Wecker
7 Associates Incorporated."

8 It is -- that is a true statement
9 in the context of this case. Whether it is a
10 true statement in the context of Dr. Hakala's
11 preparation of this affidavit, I don't know
12 one way or the other. And, indeed, he doesn't
13 say specifically that it was so for this
14 document.

15 **Q. Let me direct your attention to**
16 **Appendix A of this document which I believe**
17 **begins on paragraph 29 on page 20.**

18 A. I see that.

19 **Q. Okay. And I'd like specifically**
20 **to refer you to paragraph 31 of Appendix A.**

21 A. I'm there.

22 **Q. Now, does Dr. Hakala describe**
23 **the -- does Dr. Hakala describe the protocol**
24 **he uses to select material event dates in**
25 **paragraph 31 of Appendix A to his affidavit in**

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2 **the AOL case?**

3 MS. RODON: Objection.

4 A. To begin to answer that I would
5 have to read paragraph 31.

6 **Q. Okay. Well, why don't you take a**
7 **moment to do so.**

8 **(Document review.)**

9 A. Paragraph 31 does characterize his
10 selection of potentially material event days.
11 The paragraph along with its footnotes does
12 not -- is not completely explicit. It does
13 not in this form state a protocol that I would
14 expect somebody else to be able to implement
15 in just the way that Dr. Hakala did. That
16 might well take some more input from Dr.
17 Hakala to know exactly what he meant by the
18 summary characterization that he gives here.

19 But with that qualification my
20 answer is yes, this paragraph does describe
21 his procedure.

22 **Q. And is his description of his**
23 **procedure here similar to his description of**
24 **his procedure in paragraph 30 of his expert**
25 **report in this case?**

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2 MS. RODON: Objection.

3 A. To answer that I will have to find
4 paragraph 30 and read the two side by side.

5 **Q. As well as -- and let me add to**
6 **that as well as the footnotes to paragraph 30.**
7 **(Document review.)**

8 A. The two are not identical but
9 there are at least portions in which the
10 language is very similar and at least some of
11 the references and the comments in footnotes
12 are quite similar. So I see some
13 similarities. I see that there are
14 differences in detail in the language. To go
15 beyond that I would need to know what degree
16 of similarity you were asking me about.

17 **Q. From reading these two paragraphs**
18 **side by side do you understand that there**
19 **are -- that Dr. Hakala used a different**
20 **protocol for selecting material event days in**
21 **the earlier AOL case from the protocol he used**
22 **for selecting such dates in this case?**

23 MS. RODON: Objection.

24 A. From my reading thus far I've not
25 arrived at a judgment one way or the other as

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to whether these are identical or not. And I'm not sure that even if I -- if I took more minutes to really compare the language very closely I could know that. In light of my previous answer about this being a summary characterization.

It is possible -- if you would like me to I will take the time now to read these and see if I can identify any clear-cut material difference between the two. But even if I can't -- if I don't find such a difference I still could not know that therefore the procedure -- the two protocols were identical because these are just summaries of a -- of how a procedure was conducted.

Q. Does Dr. Hakala provide -- in his report in this case, does he provide anywhere in his expert report the necessary detail to determine the true protocol that he used to select material event dates?

MS. RODON: Objection.

A. I'm not sure of the answer one way or the other. I don't recall coming across a

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highly-detailed level of protocol in this report. But then I've focused as I've explained previously on a specific and narrow issue; namely, how did he use dummy variables to represent certain dates. Not exactly how did he arrive at those certain dates. Except in a general sense that there was an a priori selection. That he implemented an a priori selection procedure. So I don't know. I would have to go through the whole report. I don't know of such a description as I sit here, though.

MR. SCHWARTZ: Can we take a two-minute break?

MR. STRAUSS: Sure.

THE VIDEOGRAPHER: Going off the record. The time is 12:19 p.m.

(Recess taken.)

THE VIDEOGRAPHER: We're back on the record. The time is 12:26 p.m.

BY MR. SCHWARTZ:

Q. Dr. Marais, if you turn to paragraph -- you can put away the Hakala affidavit from In Re. -- from the AOL case.

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You can...

A. (Witness complies.)

Q. Now, is it your opinion that Dr. Hakala's use of dummy variables is supported by the academic, finance, and accounting literature?

A. It is certainly consistent with and -- with considerations that are expressed in that literature and is not in conflict with that literature. To give you a simple yes would seem to imply that one could find somewhere where somebody writes Dr. Hakala's use of dummy variables in the way that he did is just right. Of course, you can't. The academic literature isn't about that topic or about the specific thing that Dr. Hakala's trying to do here. But the idea -- the underlying principle is certainly in that literature.

Q. Is there any article that you are aware of that uses dummy variables in exactly the way Dr. Hakala uses them in this case?

MS. RODON: Objection.

A. I've just one moment ago testified

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that there is no article in the academic literature that does exactly what Dr. Hakala did in this case so I'll stand on that answer.

Q. Okay. Now, we talked about before Dr. Hakala uses dummy variables for approximately 56 percent of the days in that 388 day trading day period we were talking about. Now, let's assume for the moment that Dr. Hakala had -- instead of 56 percent he had used dummy variables for 80 percent of the days in that trading day period that we were talking about. Would that still be consistent with the discussion of dummy variables in the academic, finance, and accounting literature?

MS. RODON: Objection.

A. It would depend -- as a whole in the context of his event study it would depend on how many observations were left, what were the reasons for effectively excluding those 80 percent of potential observations. So it would depend on the -- on the context. There's not enough in your hypothetical for me to give you an answer at the same level of thoughtful consideration that I did to the

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2 actual analysis that he performed in this
3 case.

4 In any case, it would not be the
5 dis -- the criterion that I would be using
6 would not be the mechanistic and superficial
7 percent of some universe of observations that
8 he might have been able to use that he chose
9 or decided for whatever reason not to use.

10 It would go to valid technical
11 principles concerning the validity of the
12 exercise; not -- and it would not depend on a
13 number like 56 or 80.

14 **Q. Assuming for the moment that there**
15 **were enough days remaining -- enough**
16 **observations remaining that you could have**
17 **confidence that Dr. Hakala could perform a**
18 **regression on the remaining days. Let's say**
19 **he implemented in this case the same protocol**
20 **that he did to get the 216 or so days that he**
21 **dummied out but instead he dummied out even**
22 **more days and got to 80 percent of that 388**
23 **day trading period. So for the same purpose**
24 **that he does so in this case just instead of**
25 **being 56 percent it was 80 percent.**

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2 **That would not in your view be**
3 **inconsistent with the academic finance and**
4 **accounting literature?**

5 MS. RODON: Objection.

6 A. You're asking me to assume that he
7 implemented the same protocol that he actually
8 used in this case but arrived at a result that
9 you're asking me to assume is hugely different
10 on this metric that you've put in your
11 question or very different, the 56 to
12 80 percent.

13 The hypothetical -- it appears to
14 me to contradict itself in the way that I've
15 just identified and I -- and since it does not
16 make sense to me I don't know how to give you
17 a sensible answer to it. If you can clarify
18 how this comes about, how it is that Dr.
19 Hakala in your hypothetical applies the same
20 procedure and gets a different result. This
21 is not a different analyst, a different
22 researcher.

23 **Q. Sure. Are you aware that Dr.**
24 **Hakala filed a declaration in this case in**
25 **connection with plaintiff's motion for class**

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2 certification?

3 A. I have -- it wouldn't surprise me
4 if such a thing had happened but I don't have
5 any direct knowledge of it. I'm not aware of
6 it.

7 **Q. Well, I will represent to you that**
8 **he did so. And I will represent to you that**
9 **he also performed an event study in connection**
10 **with his class certification declaration in**
11 **this case and I will represent that his**
12 **description of the protocol that he used to**
13 **identify material event days in that**
14 **declaration was similar to the protocol that**
15 **he uses -- his description of the protocol**
16 **that he uses here except that he ended up with**
17 **132 material event days in that declaration**
18 **and he has 216 material event days here.**

19 **So with that information I'd like**
20 **to now turn you back to my hypothetical.**
21 **Let's assume that Dr. Hakala employing the**
22 **same protocol that he uses to identify**
23 **material event days, instead of coming up with**
24 **56 percent he comes up with 80 percent and**
25 **those were the days he dummies out.**

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2 **Under those circumstances, would**
3 **you view it as consistent with the academic,**
4 **finance and accounting literature?**

5 MS. RODON: Objection.

6 **Q. His use of dummy variables.**

7 A. Okay. So the preamble to your
8 question was meant to clean up the problem I
9 had as I understand it with your previous
10 question, but it unfortunately does not do
11 that. So to try to be helpful on this let me
12 interpret your question as follows and then
13 I'll answer the question that does -- that I
14 can understand at least.

15 I think you're asking me to assume
16 counterfactually that Dr. Hakala employed
17 exactly the protocol that he did employ in
18 the -- for the report that I have read, but
19 counterfactually had -- that that resulted in
20 80 percent of the days being associated with
21 dummy variables. Leaving, in other words,
22 20 percent or approximately 78 observations
23 total not dummied out in his data set.

24 I would notice that 78 is getting
25 towards the low end of what would be

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conventionally used in a -- an event study or market model regression using daily data. It's a small number for that purpose. Probably not unprecedentedly small. But it looks to me unusual. I would notice that one thing.

But I would not disqualify the exercise based on the 80 percent alone. I would consider in the same way that I considered his actual report -- about the event study the way he actually did it, that circumstance, and removing for cause from the estimation period, from the estimation data, certain observations is not in itself a disqualification and is not in itself -- is not per se inconsistent with the accounting and finance literature.

Indeed, the reason in the actual case for Dr. Hakala's removal of certain dates is affirmatively and positively consistent with ideas that are in the peer reviewed literature.

Q. Did you analyze any of the specific days Dr. Hakala dummied out to

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determine whether it was consistent with the criteria in the literature for employing a dummy variable on?

MS. RODON: Objection.

A. Your question conflates two issues; one of which I have considered and one of which I have not considered. To be clear, the question that I have considered is whether it is appropriate and consistent -- whether it is, per se, appropriate and consistent with the academic literature to use multiple dummy variables in the way that Dr. Hakala has. That is an issue that I have considered. It's not -- I have not performed any detailed numerical analysis of that issue. It's not that kind of question. But it's an issue that I have considered and on which I have expressed an opinion in my report in this case.

The other part of your question seems to go to whether a particular day for which Dr. Hakala used a dummy variable in his report, whether the reason Dr. Hakala's stated reason for using a dummy variable for that day

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is supported by academic literature.

Well, Dr. Hakala quotes some academic literature but the connection between his decisions on certain days and the academic literature that he quotes is outside the scope of what I have looked at and been asked to consider in this case.

So the answer -- the only fair answer to your question is yes and no as explained in this rather lengthy preamble.

Q. You used the term "per se" a few times. Is it fair to say that your opinion with respect to Dr. Hakala's use of dummy variables is that based on the literature it is not per se inappropriate to use multiple dummy variables to account for -- well, let's leave it at that. That it's not per se inconsistent with the literature to use multiple dummy variables for days in the estimation in the course of performing the regression analysis?

MS. RODON: Objection.

A. That seems like a fair statement.

But my opinions are the opinions that I have

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stated in my report for the reasons that I have stated in my report and to the extent that you meant by that to summarize what I have in my report, yes, I would agree with it.

If you meant to change in any way what I have stated in my report, then I would disagree.

Q. I meant -- I'm trying to make sure I understand the opinion that you've expressed in your report. So my attempt there was to summarize your opinion.

Now, does your -- does your opinion go beyond that?

MR. STRAUSS: Objection.

A. The -- to help us get to closure on this perhaps you could point to a specific opinion of the three opinions that I have in the report and tell me what the "that" is that you are asking me whether it goes beyond.

Q. The opinion expressed in paragraph 6. Does that opinion go beyond what we just talked about?

MS. RODON: Objection.

A. What we just talked about is

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